

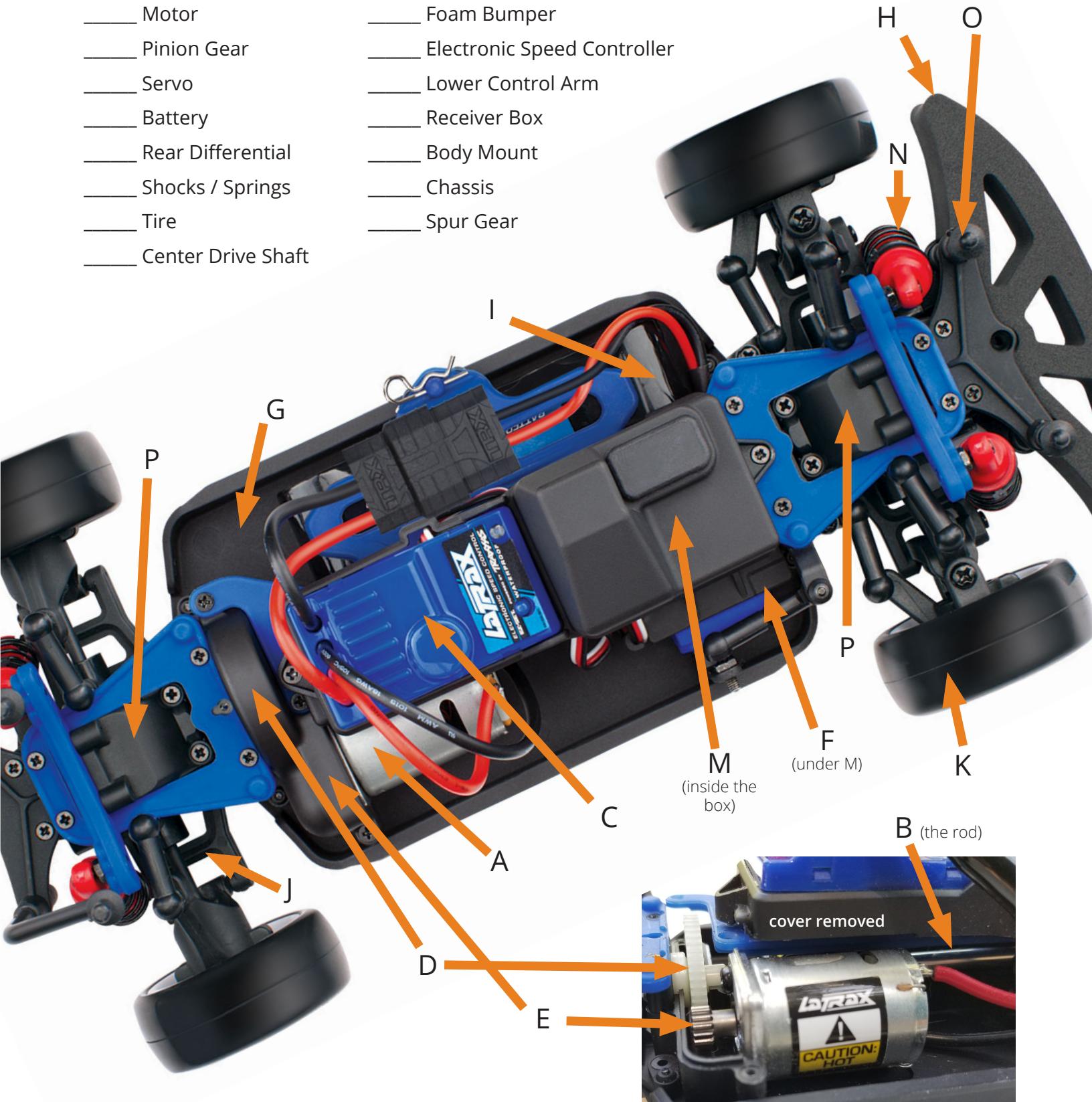


# Mechanical Memory

Study then from memory, match the lettered car part to its name.

- Motor
- Pinion Gear
- Servo
- Battery
- Rear Differential
- Shocks / Springs
- Tire
- Center Drive Shaft

- Foam Bumper
- Electronic Speed Controller
- Lower Control Arm
- Receiver Box
- Body Mount
- Chassis
- Spur Gear



# Glossary: Mechanical Memory

- A. Motor: A motor is a device that converts electrical energy to mechanical energy, or motion.
- B. Center Drive Shaft: This is the bar or rod that runs down the center of the car, called an axle because it rotates the wheels. Use your hand to roll the car forwards and backwards. As it moves, watch the axle turn. The axle is turned by the motor. The spinning axle turns the wheels.
- C. Electronic Speed Controller (ESC): The device that interprets signals from the receiver, sending information to the motor about how fast to turn and in which direction to turn.
- D. Spur Gear: On an RC car, the spur gear that meshes with the pinion gear. It transfers energy to the wheels through the center drive shaft.
- E. Pinion Gear: On an electric RC car, the pinion gear attaches to the shaft of the electric motor and meshes with the larger spur gear to provide power to the drivetrain.
- F. Servo: An electrical device that rotates or pushes other parts. The servo in this car steers the wheels.
- G. Chassis: In general, a chassis consists of an internal framework that supports a man-made object. It is like an animal's skeleton. For the RC car, it is the platform upon which internal parts such as the motor sit.
- H. Foam Bumper: The foam part that helps protect the important parts from harm.
- I. Battery: The battery is a container that stores energy until its needed. This RC car uses Ni-Cd (Nickel Cadmium) or Ni-MH (Nickel-metal hydride), 7.2 volt batteries.
- J. Lower Control Arm: A control arm, also called suspension arm, is a bar that has a pivot at both ends. Control arms are part of the suspension system. There are four on the car, one for each wheel. They attach parts of the suspension system to the chassis and help the wheels move together with the body of the car.
- K. Tire: Different from the wheel or rim, a tire is a ring-shaped covering that fits around a wheel rim to protect it and provide a flexible cushion that absorbs shock while keeping the wheel in close contact with the ground.
- M. Receiver (inside the box): Receives the commands from the transmitter and sends them to different devices including the electronic speed controller (ESC).
- N. Shocks & Springs: Shocks and springs are not the same thing, but work together as a single assembly in the suspension system. Springs are literally springs that dictate the stiffness and height of the car. The shock is an oil-filled cylinder with piston and set the rate of spring motion.
- O. Body Mount: Posts with clips where you can attach a car body at varied heights and angles.
- P. Rear Differential: There is one differential in the front and one in the back. Each of them is made up of a series of gears that transfer power and change direction of the motion from the center shaft (part B) to the wheels.